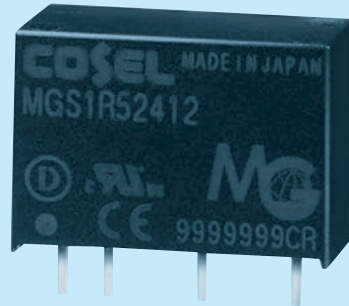


MGS1R5

MG S 1R5 24 05 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
- Y2: Output voltage adjustable (+10%, -5%)

MODEL	MGS1R5053R3	MGS1R50505	MGS1R50512	MGS1R50515	MGS1R5123R3	MGS1R51205	MGS1R51212	MGS1R51215
MAX OUTPUT WATTAGE[W]	1.32	1.50	1.56	1.50	1.32	1.50	1.56	1.50
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	0.4	0.3	0.13	0.1	0.4	0.3	0.1

SPECIFICATIONS

	MODEL	MGS1R5053R3	MGS1R50505	MGS1R50512	MGS1R50515	MGS1R5123R3	MGS1R51205	MGS1R51212	MGS1R51215
INPUT	VOLTAGE[V]	DC4.5 - 9 (Surge voltage 12.5V, 100ms max)				DC9 - 18 (Surge voltage 25V, 100ms max)			
	CURRENT[A]	*1 0.33typ	0.37typ	0.37typ	0.36typ	0.14typ	0.15typ	0.16typ	0.15typ
	EFFICIENCY[%]	*1 80typ	82typ	85typ	84typ	80typ	83typ	84typ	84typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	0.4	0.3	0.13	0.1	0.4	0.3	0.13	0.1
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	RIPPLE[mVp-p]	*2 120max	120max	150max	150max	120max	120max	150max	150max
	RIPPLE NOISE[mVp-p]	*2 200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +85°C	50max	50max	150max	180max	50max	50max	180max
		-40 to +85°C	80max	80max	240max	290max	80max	80max	240max
	DRIFT[mV]	*3 20max	20max	48max	60max	20max	20max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)							
PROTECTION CIRCUIT	OUTPUT VOLTAGE SETTING[V]	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							

MODEL	MGS1R5243R3	MGS1R52405	MGS1R52412	MGS1R52415	MGS1R5483R3	MGS1R54805	MGS1R54812	MGS1R54815
MAX OUTPUT WATTAGE[W]	1.32	1.50	1.56	1.50	1.32	1.50	1.56	1.50
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	0.4	0.3	0.13	0.1	0.4	0.3	0.1

SPECIFICATIONS

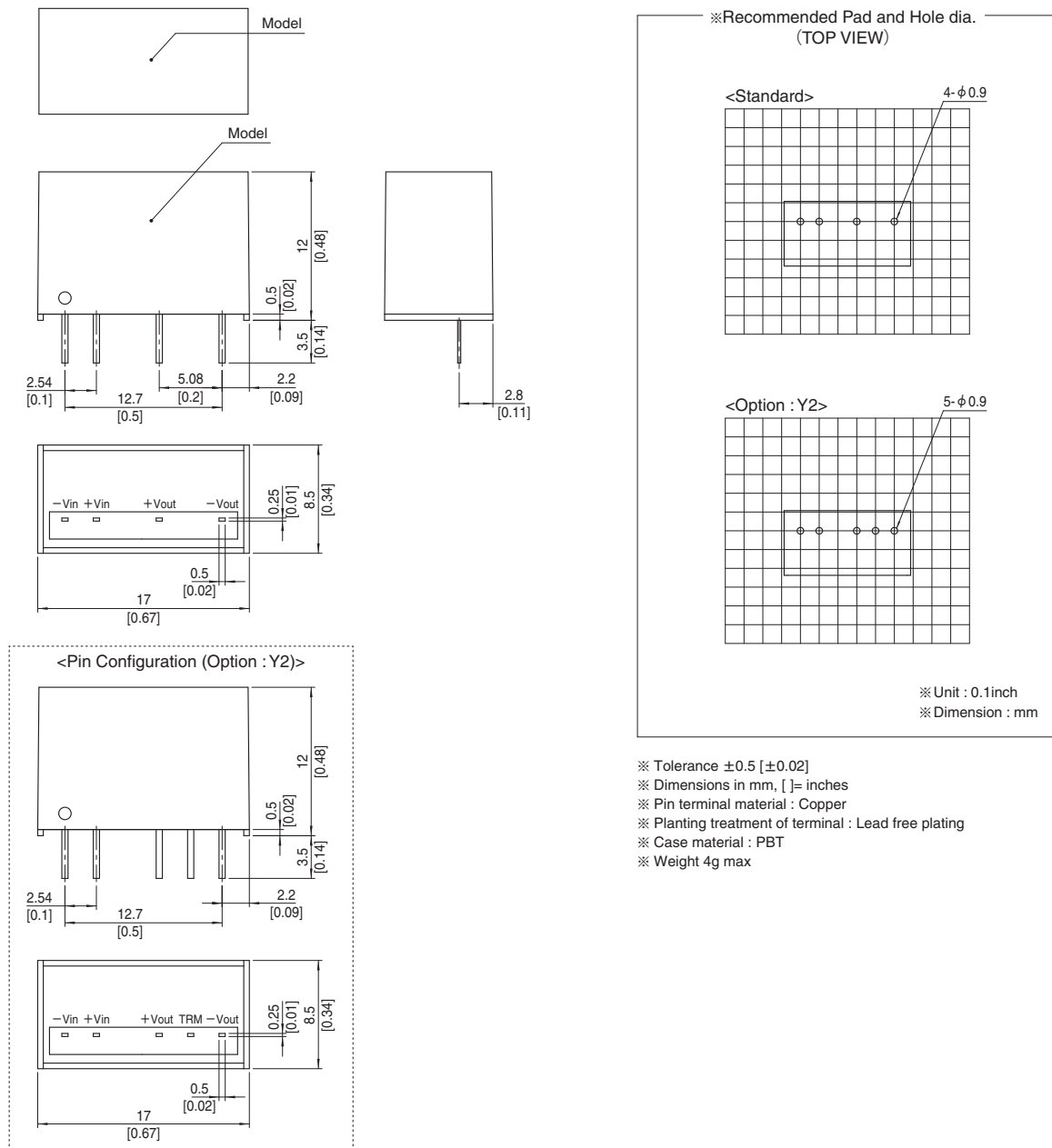
	MODEL	MGS1R5243R3	MGS1R52405	MGS1R52412	MGS1R52415	MGS1R5483R3	MGS1R54805	MGS1R54812	MGS1R54815
INPUT	VOLTAGE[V]	DC18 - 36 (Surge voltage 50V, 100ms max)				DC36 - 76 (Surge voltage 100V, 100ms max)			
	CURRENT[A]	*1 0.071typ	0.079typ	0.080typ	0.077typ	0.036typ	0.040typ	0.040typ	0.039typ
	EFFICIENCY[%]	*1 78typ	80typ	82typ	82typ	77typ	80typ	82typ	82typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	0.4	0.3	0.13	0.1	0.4	0.3	0.13	0.1
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	RIPPLE[mVp-p]	*2 120max	120max	150max	150max	120max	120max	150max	150max
	RIPPLE NOISE[mVp-p]	*2 200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +85°C	50max	50max	150max	180max	50max	50max	180max
		-40 to +85°C	80max	80max	240max	290max	80max	80max	240max
	DRIFT[mV]	*3 20max	20max	48max	60max	20max	20max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)							
PROTECTION CIRCUIT	OUTPUT VOLTAGE SETTING[V]	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							

GENERAL SPECIFICATIONS

ISOLATION	INPUT-OUTPUT	DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15°C)
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz 98.0m/s ² (10G), 3minute period, 60minutes each along X, Y and Z axis
	IMPACT	490.3m/s ² (50G) 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	17.0×12.0×8.5mm [0.67×0.48×0.34 inches] (W×H×D) / 4g max
	COOLING METHOD	Convection/Forced air

- *1 Rated input 5V, 12V, 24V or 48V DC Io=100%
- *2 Ripple and ripple noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins.
- *3 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- * Parallel operation with other model is not possible.
- * MGW1R5xx12/MGW1R5xx15 is available as single output, +24V/+30V

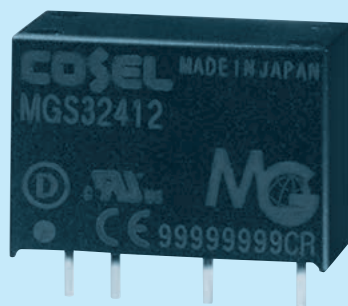
External view



MGS3

MG S 3 24 05 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
 ② Single output
 ③ Output wattage
 ④ Input voltage
 ⑤ Output voltage
 ⑥ Optional
 Y2: Output voltage adjustable (+10%, -5%)

MODEL	MGS3053R3	MGS30505	MGS30512	MGS30515	MGS3123R3	MGS31205	MGS31212	MGS31215
MAX OUTPUT WATTAGE[W]	2.64	3.0	3.0	3.0	2.64	3.0	3.0	3.0
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	0.8	0.6	0.25	0.2	0.8	0.6	0.25

SPECIFICATIONS

	MODEL	MGS3053R3	MGS30505	MGS30512	MGS30515	MGS3123R3	MGS31205	MGS31212	MGS31215
INPUT	VOLTAGE[V]	DC4.5 - 9 (Surge voltage 12.5V, 100ms max)				DC9 - 18 (Surge voltage 25V, 100ms max)			
	CURRENT[A]	*1 0.67typ	0.73typ	0.71typ	0.71typ	0.28typ	0.30typ	0.29typ	0.30typ
	EFFICIENCY[%]	*1 79typ	82typ	85typ	85typ	80typ	83typ	86typ	85typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	0.8	0.6	0.25	0.2	0.8	0.6	0.25	0.2
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	RIPPLE[mVp-p]	*2 120max	120max	150max	150max	120max	120max	150max	150max
	RIPPLE NOISE[mVp-p]	*2 200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE	-20 to +75°C	50max	50max	150max	180max	50max	50max	180max
	REGULATION[mV]	-40 to +75°C	80max	80max	240max	290max	80max	80max	240max
	DRIFT[mV]	*3 20max	20max	48max	60max	20max	20max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, I _o =100%)							
PROTECTION CIRCUIT	OUTPUT VOLTAGE SETTING[V]	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							

MODEL	MGS3243R3	MGS32405	MGS32412	MGS32415	MGS3483R3	MGS34805	MGS34812	MGS34815
MAX OUTPUT WATTAGE[W]	2.64	3.0	3.0	3.0	2.64	3.0	3.0	3.0
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	0.8	0.6	0.25	0.2	0.8	0.6	0.25

SPECIFICATIONS

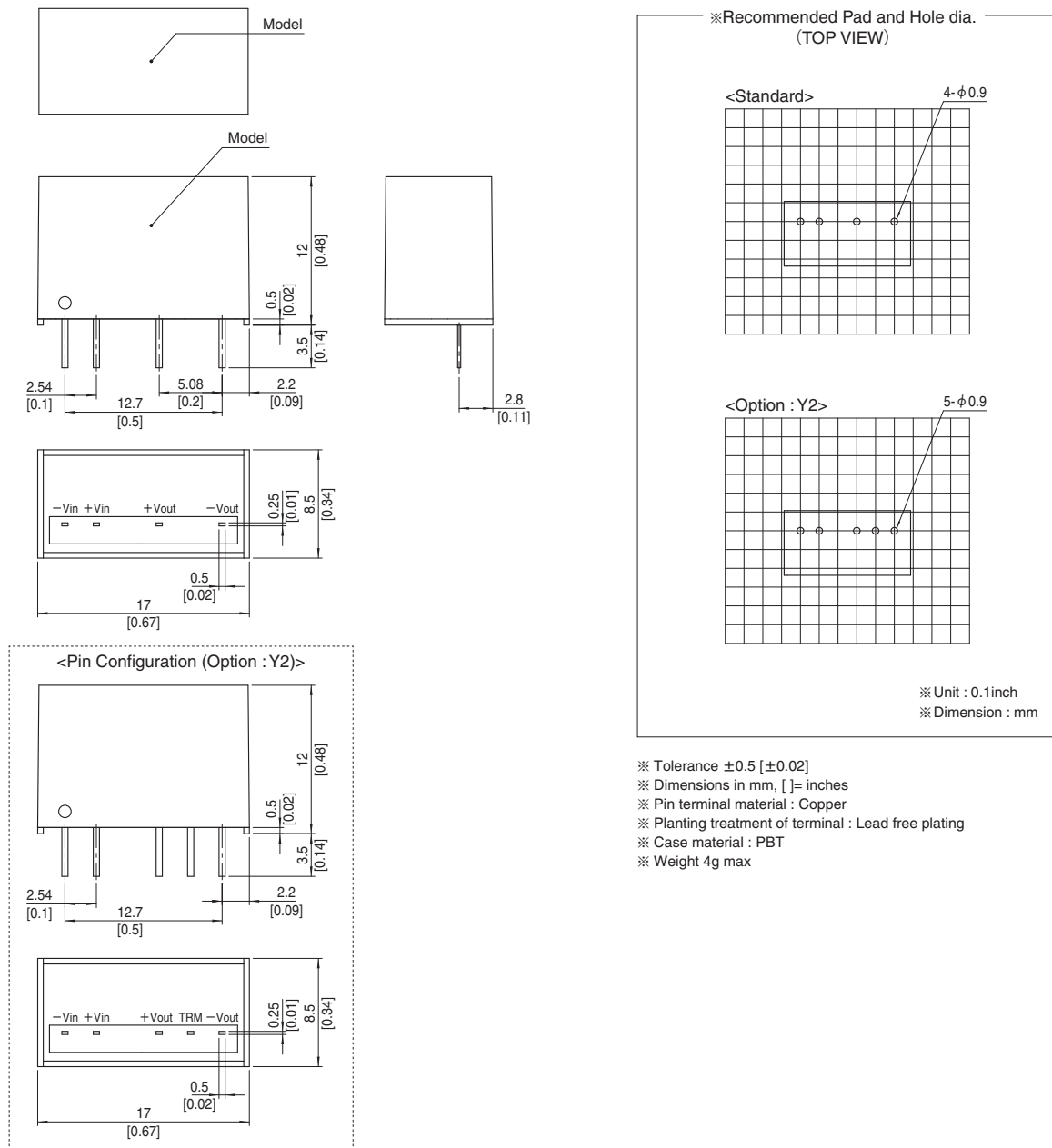
	MODEL	MGS3243R3	MGS32405	MGS32412	MGS32415	MGS3483R3	MGS34805	MGS34812	MGS34815
INPUT	VOLTAGE[V]	DC18 - 36 (Surge voltage 50V, 100ms max)				DC36 - 76 (Surge voltage 100V, 100ms max)			
	CURRENT[A]	*1 0.14typ	0.15typ	0.15typ	0.15typ	0.071typ	0.079typ	0.074typ	0.074typ
	EFFICIENCY[%]	*1 80typ	82typ	85typ	85typ	78typ	80typ	85typ	85typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	0.8	0.6	0.25	0.2	0.8	0.6	0.25	0.2
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	RIPPLE[mVp-p]	*2 120max	120max	150max	150max	120max	120max	150max	150max
	RIPPLE NOISE[mVp-p]	*2 200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE	-20 to +75°C	50max	50max	150max	180max	50max	50max	180max
	REGULATION[mV]	-40 to +75°C	80max	80max	240max	290max	80max	80max	240max
	DRIFT[mV]	*3 20max	20max	48max	60max	20max	20max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, I _o =100%)							
PROTECTION CIRCUIT	OUTPUT VOLTAGE SETTING[V]	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							

GENERAL SPECIFICATIONS

ISOLATION	INPUT-OUTPUT	DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000M Ω min (20 $\pm$ 15°C)
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz 98.0m/s ² (10G), 3minute period, 60minutes each along X, Y and Z axis
	IMPACT	490.3m/s ² (50G) 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	17.0 $\times$ 12.0 $\times$ 8.5mm [0.67 $\times$ 0.48 $\times$ 0.34 inches] (W $\times$ H $\times$ D) / 4g max
	COOLING METHOD	Convection/Forced air

- *1 Rated input 5V, 12V, 24V or 48V DC Io=100%
- *2 Ripple and ripple noise is measured by using test board with ceramic capacitor 1 μ F at 50mm from output pins.
- *3 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- * Parallel operation with other model is not possible.
- * MGW3xx12/MGW3xx15 is available as single output, +24V/+30V

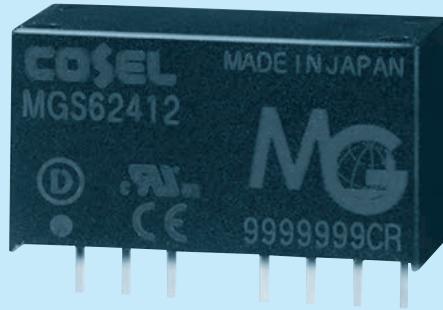
External view



MGS6

MG S 6 24 05 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
- Y2: Output voltage adjustable (+10%, -5%)

MODEL	MGS6053R3	MGS60505	MGS60512	MGS60515	MGS6123R3	MGS61205	MGS61212	MGS61215
MAX OUTPUT WATTAGE[W]	5.28	6.0	6.0	6.0	5.28	6.0	6.0	6.0
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	1.6	1.2	0.5	0.4	1.6	1.2	0.5

SPECIFICATIONS

	MODEL	MGS6053R3	MGS60505	MGS60512	MGS60515	MGS6123R3	MGS61205	MGS61212	MGS61215
INPUT	VOLTAGE[V]	DC4.5 - 9 (Surge voltage 12.5V, 100ms max)				DC9 - 18 (Surge voltage 25V, 100ms max)			
	CURRENT[A]	*1 1.31typ	1.42typ	1.37typ	1.37typ	0.54typ	0.59typ	0.57typ	0.57typ
	EFFICIENCY[%]	*1 81typ	85typ	88typ	88typ	82typ	85typ	89typ	89typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	1.6	1.2	0.5	0.4	1.6	1.2	0.5	0.4
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	RIPPLE[mVp-p]	*2 lo=30% - 75max		75max	100max	100max	75max	75max	100max
	RIPPLE NOISE[mVp-p]	lo=0 - 30% 225max		225max	300max	300max	225max	225max	300max
		lo=30% - 120max		120max	150max	120max	120max	150max	150max
	TEMPERATURE REGULATION[mV]	*2 lo=0 - 30% 300max		300max	400max	400max	300max	300max	400max
		-20 to +70°C 50max		50max	180max	50max	50max	150max	180max
	DRIFT[mV]	-40 to +70°C 80max		80max	240max	80max	80max	240max	290max
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)							
	START-UP TIME[ms]	30max (Minimum input, lo=100%)							
	OUTPUT VOLTAGE SETTING[V]	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45

MODEL	MGS6243R3	MGS62405	MGS62412	MGS62415	MGS6483R3	MGS64805	MGS64812	MGS64815
MAX OUTPUT WATTAGE[W]	5.28	6.0	6.0	6.0	5.28	6.0	6.0	6.0
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	1.6	1.2	0.5	0.4	1.6	1.2	0.5

SPECIFICATIONS

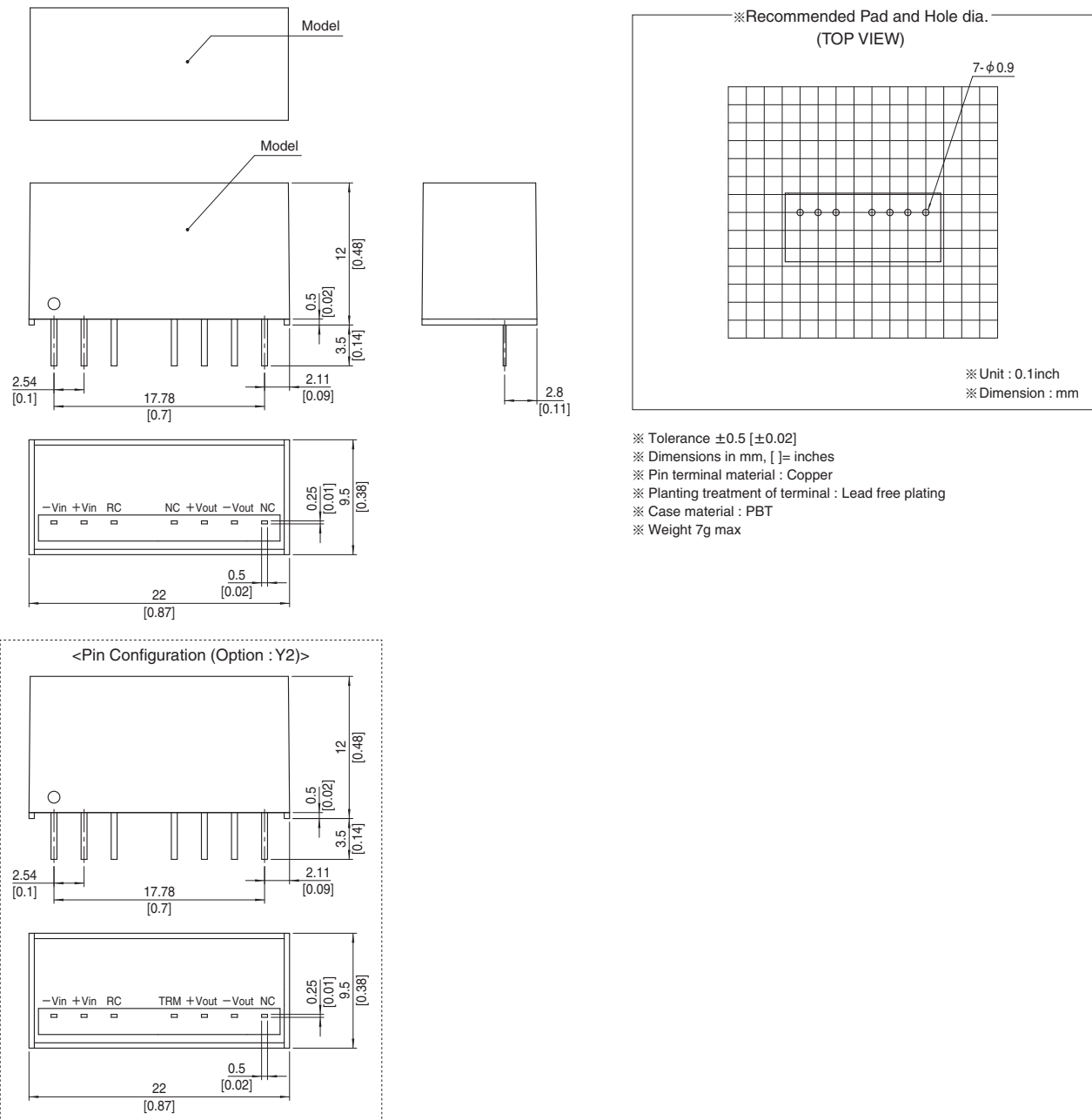
	MODEL	MGS6243R3	MGS62405	MGS62412	MGS62415	MGS6483R3	MGS64805	MGS64812	MGS64815
INPUT	VOLTAGE[V]	DC18 - 36 (Surge voltage 50V, 100ms max)				DC36 - 76 (Surge voltage 100V, 100ms max)			
	CURRENT[A]	*1 0.27typ	0.30typ	0.29typ	0.29typ	0.14typ	0.15typ	0.15typ	0.15typ
	EFFICIENCY[%]	*1 82typ	85typ	89typ	89typ	81typ	85typ	89typ	89typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	1.6	1.2	0.5	0.4	1.6	1.2	0.5	0.4
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	RIPPLE[mVp-p]	*2 lo=30% - 75max		75max	100max	100max	75max	75max	100max
	RIPPLE NOISE[mVp-p]	lo=0 - 30% 225max		225max	300max	300max	225max	225max	300max
		lo=30% - 120max		120max	150max	120max	120max	150max	150max
	TEMPERATURE REGULATION[mV]	*2 lo=0 - 30% 300max		300max	400max	400max	300max	300max	400max
		-20 to +70°C 50max		50max	180max	50max	50max	150max	180max
	DRIFT[mV]	-40 to +70°C 80max		80max	240max	80max	80max	240max	290max
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)							
	START-UP TIME[ms]	30max (Minimum input, lo=100%)							
	OUTPUT VOLTAGE SETTING[V]	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45

GENERAL SPECIFICATIONS

ISOLATION	INPUT-OUTPUT	DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000M Ω min (20 $\pm$ 15°C)
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz 98.0m/s ² (10G), 3minute period, 60minutes each along X, Y and Z axis
	IMPACT	490.3m/s ² (50G) 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	22.0 $\times$ 12.0 $\times$ 9.5mm [0.87 $\times$ 0.48 $\times$ 0.38 inches] (W $\times$ H $\times$ D) / 7g max
	COOLING METHOD	Convection/Forced air

- *1 Rated input 5V, 12V, 24V or 48V DC Io=100%
- *2 Ripple and ripple noise is measured by using test board with ceramic capacitor 1 μ F at 50mm from output pins.
- *3 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- * Parallel operation with other model is not possible.
- * MGW6xx12/MGW6xx15 is available as single output, +24V/+30V

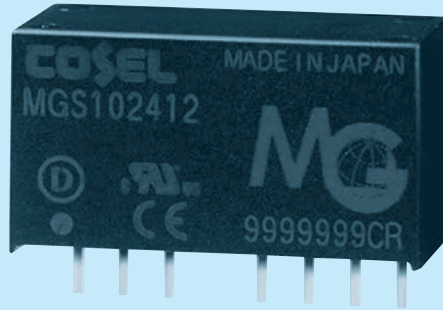
External view



MGS10

MG S 10 24 05 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
- Y2: Output voltage adjustable (+10%, -5%)

MODEL	MGS10053R3	MGS100505	MGS100512	MGS100515	MGS10123R3	MGS101205	MGS101212	MGS101215
MAX OUTPUT WATTAGE[W]	8.58	10.0	10.8	10.5	8.58	10.0	10.8	10.5
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12
	CURRENT[A]	2.6	2.0	0.9	0.7	2.6	2.0	0.9

SPECIFICATIONS

	MODEL	MGS10053R3	MGS100505	MGS100512	MGS100515	MGS10123R3	MGS101205	MGS101212	MGS101215
INPUT	VOLTAGE[V]	DC4.5 - 9 (Surge voltage 12.5V, 100ms max)				DC9 - 18 (Surge voltage 25V, 100ms max)			
	CURRENT[A]	*1 2.02typ	2.30typ	2.46typ	2.39typ	0.83typ	0.94typ	1.02typ	0.99typ
	EFFICIENCY[%]	*1 85typ	87typ	88typ	88typ	87typ	89typ	89typ	89typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	2.6	2.0	0.9	0.7	2.6	2.0	0.9	0.7
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	RIPPLE[mVp-p]	lo=30% -	75max	75max	100max	100max	75max	75max	100max
		lo=0 - 30%	225max	225max	300max	300max	225max	300max	300max
	RIPPLE NOISE[mVp-p]	lo=30% -	120max	120max	150max	150max	120max	120max	150max
		lo=0 - 30%	300max	300max	400max	400max	300max	300max	400max
	TEMPERATURE REGULATION[mV]	-20 to +50°C	50max	50max	150max	180max	50max	50max	150max
		-40 to +50°C	80max	80max	240max	290max	80max	80max	240max
PROTECTION CIRCUIT AND OTHERS	DRIFT[mV]	*3 20max	20max	48max	60max	20max	20max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, lo=100%)							
	OUTPUT VOLTAGE SETTING[V]	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
PROTECTION CIRCUIT AND OTHERS	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)							

MODEL	MGS10243R3	MGS102405	MGS102412	MGS102415	MGS10483R3	MGS104805	MGS104812	MGS104815
MAX OUTPUT WATTAGE[W]	8.58	10.0	10.8	10.5	8.58	10.0	10.8	10.5
DC OUTPUT	VOLTAGE[V]	*1 3.3	5	12	15	3.3	5	12
	CURRENT[A]	2.6	2.0	0.9	0.7	2.6	2.0	0.9

SPECIFICATIONS

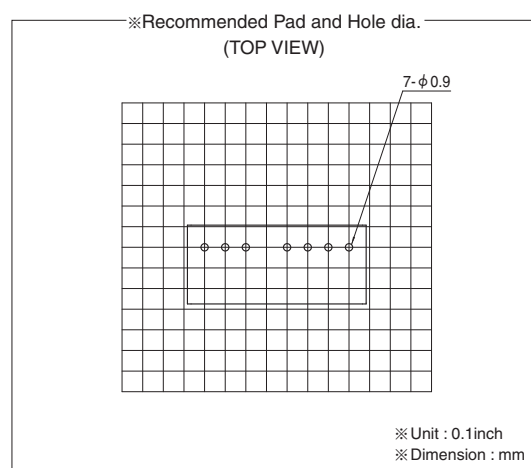
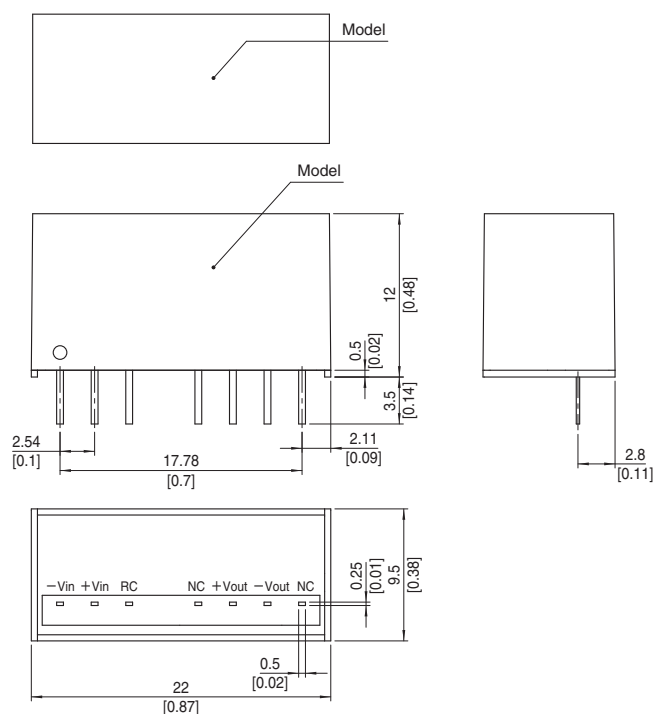
	MODEL	MGS10243R3	MGS102405	MGS102412	MGS102415	MGS10483R3	MGS104805	MGS104812	MGS104815
INPUT	VOLTAGE[V]	DC18 - 36 (Surge voltage 50V, 100ms max)				DC36 - 76 (Surge voltage 100V, 100ms max)			
	CURRENT[A]	*1 0.42typ	0.47typ	0.50typ	0.49typ	0.21typ	0.24typ	0.25typ	0.25typ
	EFFICIENCY[%]	*1 87typ	89typ	90typ	90typ	87typ	89typ	90typ	90typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	2.6	2.0	0.9	0.7	2.6	2.0	0.9	0.7
	LINE REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	LOAD REGULATION[mV]	20max	20max	48max	60max	20max	20max	48max	60max
	RIPPLE[mVp-p]	lo=30% -	75max	75max	100max	100max	75max	75max	100max
		lo=0 - 30%	225max	225max	300max	300max	225max	300max	300max
	RIPPLE NOISE[mVp-p]	lo=30% -	120max	120max	150max	150max	120max	120max	150max
		lo=0 - 30%	300max	300max	400max	400max	300max	300max	400max
	TEMPERATURE REGULATION[mV]	-20 to +50°C	50max	50max	150max	180max	50max	50max	150max
		-40 to +50°C	80max	80max	240max	290max	80max	80max	240max
PROTECTION CIRCUIT AND OTHERS	DRIFT[mV]	*3 20max	20max	48max	60max	20max	20max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, lo=100%)							
	OUTPUT VOLTAGE SETTING[V]	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45	3.21 - 3.42	4.90 - 5.21	11.64 - 12.36	14.55 - 15.45
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
PROTECTION CIRCUIT AND OTHERS	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)							

GENERAL SPECIFICATIONS

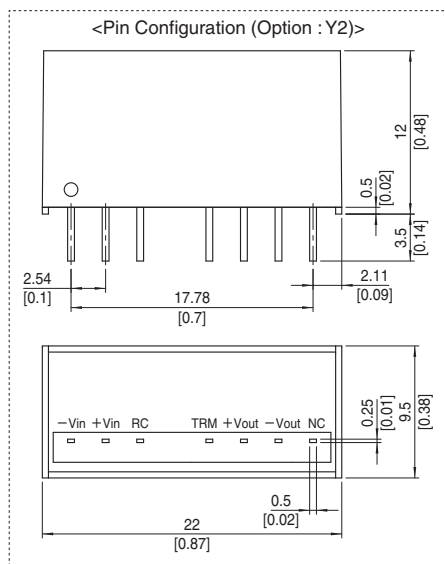
ISOLATION	INPUT-OUTPUT	DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15°C)
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz 98.0m/s ² (10G), 3minute period, 60minutes each along X, Y and Z axis
	IMPACT	490.3m/s ² (50G) 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	22.0×12.0×9.5mm [0.87×0.48×0.38 inches] (W×H×D) / 7g max
	COOLING METHOD	Convection/Forced air

- *1 Rated input 5V, 12V, 24V or 48V DC Io=100%
- *2 Ripple and ripple noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins.
- *3 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- * Parallel operation with other model is not possible.
- * MGW10xx12/MGW10xx15 is available as single output, +24V/+30V

External view



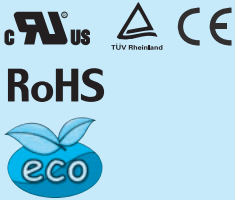
- ※ Tolerance ±0.5 [±0.02]
- ※ Dimensions in mm, [] = inches
- ※ Pin terminal material : Copper
- ※ Planting treatment of terminal : Lead free plating
- ※ Case material : PBT
- ※ Weight 7g max



MGS15

MG S 15 24 05 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
- G: Capacitor between Input and Output is removed.
- R: with Remote ON/OFF (Positive logic control)

MODEL	MGS15123R3	MGS151205	MGS151212	MGS151215	MGS15243R3	MGS152405	MGS152412	MGS152415
MAX OUTPUT WATTAGE[W]	13.2	15	15.6	15	13.2	15	15.6	15
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12	15	3.3	5	12
	CURRENT[A]	4	3	1.3	1	4	3	1

SPECIFICATIONS

	MODEL	MGS15123R3	MGS151205	MGS151212	MGS151215	MGS15243R3	MGS152405	MGS152412	MGS152415
INPUT	VOLTAGE[V]	DC9 - 18				DC18 - 36			
	CURRENT[A] *2	1.28typ	1.44typ	1.49typ	1.42typ	0.63typ	0.70typ	0.73typ	0.70typ
	EFFICIENCY[%] *2	86typ	87typ	87typ	88typ	87typ	89typ	89typ	89typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	4	3	1.3	1	4	3	1.3	1
	LINE REGULATION[mV]	13.2max	20max	48max	60max	13.2max	20max	48max	60max
	LOAD REGULATION[mV]	13.2max	20max	48max	60max	13.2max	20max	48max	60max
	RIPPLE[mVp-p] *3	-20 to +60°C	75max	75max	100max	100max	75max	75max	100max
		-40 to -20°C	100max	100max	120max	120max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	-20 to +60°C	75max	75max	100max	100max	75max	100max	100max
		-40 to -20°C	150max	150max	150max	150max	150max	150max	150max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	50max	150max	180max	50max	50max	150max
		-40 to +60°C	80max	80max	240max	290max	80max	80max	240max
PROTECTION CIRCUIT AND OTHERS	DRIFT[mV] *4	20max	20max	48max	60max	20max	20max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE	Fixed (TRM pin open) Available to adjust ±10% by external variable resistor							
	OUTPUT VOLTAGE SETTING[V] *5	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
PROTECTION CIRCUIT AND OTHERS	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)							

MODEL	MGS15483R3	MGS154805	MGS154812	MGS154815
MAX OUTPUT WATTAGE[W]	13.2	15	15.6	15
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12
	CURRENT[A]	4	3	1.3

SPECIFICATIONS

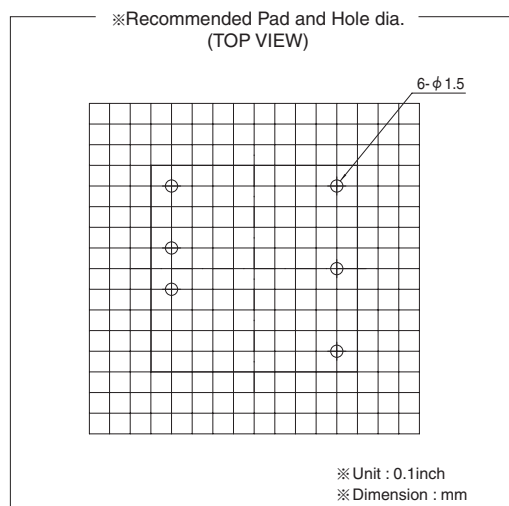
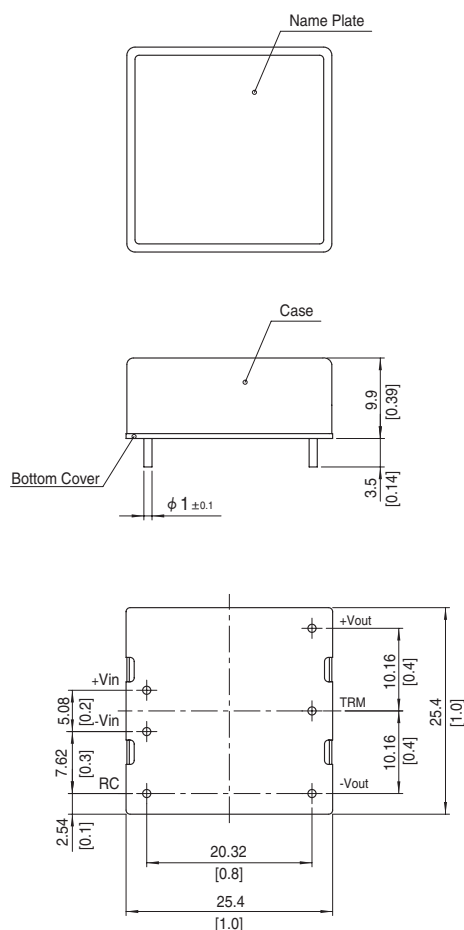
	MODEL	MGS15483R3	MGS154805	MGS154812	MGS154815
INPUT	VOLTAGE[V]	DC36 - 76			
	CURRENT[A] *2	0.32typ	0.35typ	0.36typ	0.35typ
	EFFICIENCY[%] *2	87typ	89typ	90typ	90typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15
	CURRENT[A]	4	3	1.3	1
	LINE REGULATION[mV]	13.2max	20max	48max	60max
	LOAD REGULATION[mV]	13.2max	20max	48max	60max
	RIPPLE[mVp-p] *3	-20 to +60°C	75max	75max	100max
		-40 to -20°C	100max	100max	120max
	RIPPLE NOISE[mVp-p] *3	-20 to +60°C	75max	75max	100max
		-40 to -20°C	150max	150max	150max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	50max	150max
		-40 to +60°C	80max	80max	240max
PROTECTION CIRCUIT AND OTHERS	DRIFT[mV] *4	20max	20max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)			
	OUTPUT VOLTAGE ADJUSTMENT RANGE	Fixed (TRM pin open) ±10% adjustable by external VR			
	OUTPUT VOLTAGE SETTING[V] *5	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically			
PROTECTION CIRCUIT AND OTHERS	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)			

GENERAL SPECIFICATIONS

ISOLATION	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃)
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃)
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃)
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85℃, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100℃, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz, 98.0m/s ² (10G), 3minutes period, 60minutes each along X, Y and Z axis
	IMPACT	490.3m/s ² (50G), 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	25.4 X 9.9 X 25.4mm [1 X 0.39 X 1 inches] (W X H X D) / 20g max
	COOLING METHOD	Convection/Forced air

- *1 MGW15xx05/MGW15xx12/MGW15xx15 is available as single output, +10V/+24V/+30V
- *2 Rated input 12V, 24V or 48V DC I_o=100%
- *3 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 22μF at 50mm from output pins. (20MHz Oscilloscope)
- *4 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25℃.
- *5 Rated input voltage (DC12V, DC24V, DC48V), rated output wattage, ambient temperature at 25℃.
- * Parallel operation with other model is not possible.

External view

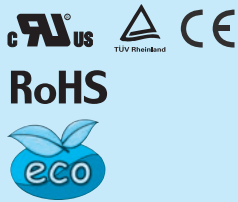


- ※ Tolerance ±0.5 [±0.02]
- ※ Dimensions in mm, []=inches
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Bottom Cover : FR4 (t=0.6) [t=0.024]
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Weight 20g max

MGS30

MG S 30 24 05 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
- G: Capacitor between Input and Output is removed.
- R: with Remote ON/OFF (Positive logic control)

MODEL	MGS30123R3	MGS301205	MGS301212	MGS301215	MGS30243R3	MGS302405	MGS302412	MGS302415
MAX OUTPUT WATTAGE[W]	26.4	30	30	30	26.4	30	30	30
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12	15	3.3	5	12
	CURRENT[A]	8	6	2.5	2	8	6	2.5

SPECIFICATIONS

	MODEL	MGS30123R3	MGS301205	MGS301212	MGS301215	MGS30243R3	MGS302405	MGS302412	MGS302415
INPUT	VOLTAGE[V]	DC9 - 18				DC18 - 36			
	CURRENT[A] *2	2.45typ	2.75typ	2.78typ	2.78typ	1.21typ	1.36typ	1.36typ	1.36typ
	EFFICIENCY[%] *2	90typ	91typ	90typ	90typ	91typ	92typ	92typ	92typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15	3.3	5	12	15
	CURRENT[A]	8	6	2.5	2	8	6	2.5	2
	LINE REGULATION[mV]	13.2max	20max	48max	60max	13.2max	20max	48max	60max
	LOAD REGULATION[mV]	13.2max	20max	48max	60max	13.2max	20max	48max	60max
	RIPPLE[mVp-p]	-20 to +60°C	75max	75max	100max	100max	75max	75max	100max
		*3 -40 to -20°C	100max	100max	120max	120max	100max	100max	120max
	RIPPLE NOISE[mVp-p]	-20 to +60°C	75max	75max	100max	100max	75max	75max	100max
		*3 -40 to -20°C	150max	150max	150max	150max	150max	150max	150max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	50max	150max	180max	50max	50max	150max
		-40 to +60°C	80max	80max	240max	290max	80max	80max	240max
PROTECTION CIRCUIT AND OTHERS	DRIFT[mV] *4	20max	20max	48max	60max	20max	20max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE	Fixed (TRM pin open) ±10% adjustable by external VR							
	OUTPUT VOLTAGE SETTING[V] *5	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
PROTECTION CIRCUIT AND OTHERS	OVERVOLTAGE PROTECTION[V]	Works over 120 to 160% of rating							
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)							

MODEL	MGS30483R3	MGS304805	MGS304812	MGS304815
MAX OUTPUT WATTAGE[W]	26.4	30	30	30
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12
	CURRENT[A]	8	6	2.5

SPECIFICATIONS

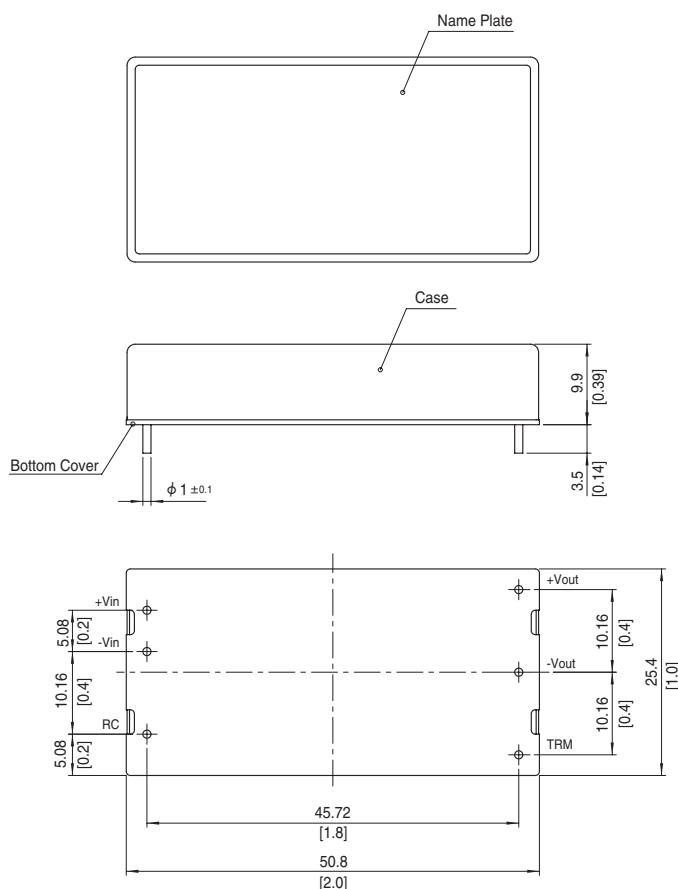
	MODEL	MGS30483R3	MGS304805	MGS304812	MGS304815
INPUT	VOLTAGE[V]	DC36 - 76			
	CURRENT[A] *2	0.61typ	0.68typ	0.68typ	0.68typ
	EFFICIENCY[%] *2	91typ	92typ	92typ	92typ
OUTPUT	VOLTAGE[V]	3.3	5	12	15
	CURRENT[A]	8	6	2.5	2
	LINE REGULATION[mV]	13.2max	20max	48max	60max
	LOAD REGULATION[mV]	13.2max	20max	48max	60max
	RIPPLE[mVp-p]	-20 to +60°C	75max	75max	100max
		*3 -40 to -20°C	100max	100max	120max
	RIPPLE NOISE[mVp-p]	-20 to +60°C	75max	75max	100max
		*3 -40 to -20°C	150max	150max	150max
	TEMPERATURE REGULATION[mV]	-20 to +60°C	50max	50max	150max
		-40 to +60°C	80max	80max	240max
PROTECTION CIRCUIT AND OTHERS	DRIFT[mV] *4	20max	20max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)			
	OUTPUT VOLTAGE ADJUSTMENT RANGE	Fixed (TRM pin open) ±10% adjustable by external VR			
	OUTPUT VOLTAGE SETTING[V] *5	3.296 - 3.404	4.975 - 5.137	11.857 - 12.243	14.839 - 15.321
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically			
PROTECTION CIRCUIT AND OTHERS	OVERVOLTAGE PROTECTION[V]	Works over 120 to 160% of rating			
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)			

GENERAL SPECIFICATIONS

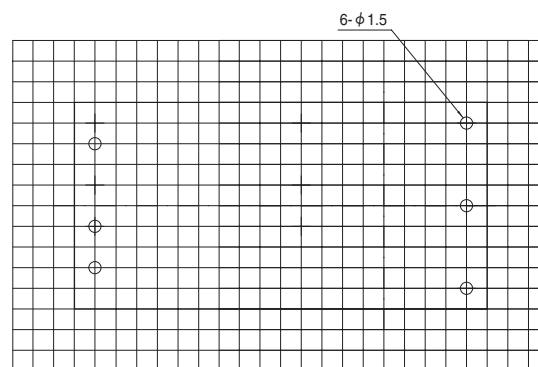
ISOLATION	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000M Ω min (20 $\pm$ 15 $^{\circ}$ C)
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000M Ω min (20 $\pm$ 15 $^{\circ}$ C)
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000M Ω min (20 $\pm$ 15 $^{\circ}$ C)
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85 $^{\circ}$ C, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100 $^{\circ}$ C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz, 98.0m/s 2 (10G), 3minutes period, 60minutes each along X, Y and Z axis
	IMPACT	490.3m/s 2 (50G), 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1
OTHERS	CASE SIZE/WEIGHT	25.4 X 9.9 X 50.8mm [1 X 0.39 X 2 inches] (W X H X D) / 40g max
	COOLING METHOD	Convection/Forced air

- *1 MGW30xx05/MGW30xx12/MGW30xx15 is available as single output, +10V/+24V/+30V
- *2 Rated input 12V, 24V or 48V DC $I_o=100\%$
- *3 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 22 μ F at 50mm from output pins. (20MHz Oscilloscope)
- *4 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25 $^{\circ}$ C.
- *5 Rated input voltage (DC12V, DC24V, DC48V), rated output wattage, ambient temperature at 25 $^{\circ}$ C.
- * Parallel operation with other model is not possible.

External view



※Recommended Pad and Hole dia.
(TOP VIEW)



※ Unit : 0.1inch
※ Dimension : mm

- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, []=inches
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Bottom Cover : FR4 (t=0.6) [t=0.024]
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Weight 40g max



Макро Групп – это:

- дистрибьютор электронных компонентов с 1994 года
- контрактный производитель электроники с 2007 года с собственным производством в Санкт-Петербурге (компания Макро ЕМС, входит в ГК Макро Групп)
- поставщик полупроводниковых материалов
- комплексный поставщик электронных компонентов
- моделирование и производство полупроводниковых эпитаксиальных гетероструктур для задач оптоэлектроники

Головной офис расположен в Санкт-Петербурге. Собственные представительства в крупных промышленных городах России и стран СНГ.

Преимущества для наших заказчиков:

- работа по тендерам с 2012 года
- оформление банковских гарантий
- отсрочки платежей
- поставка электронных компонентов по проектным ценам
- инженерная поддержка проектов заказчиков
- сертификат системы менеджмента качества ISO 9001-2015
- необходимые сертификаты и лицензии

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